

ABSTRACT OF THE DISCLOSURE

The switched-mode power supply includes an output value sensor circuit measuring a current flow through a switching device and a switching control circuit implementing overcurrent protection. Also included in the power supply are: a second output voltage sensor circuit detecting a high output voltage V_{o2} for the second load; and a short-circuit device 18 quasi-shortening the terminals of the second load when the detected value of the voltage is more than or equal to a specific value. Therefore, if the short-circuit device 18 shorts out, the secondary load increases, and the output for the relatively low load L1 can be restrained by overcurrent protection. Thus, a reliable overcurrent protection can be achieved using a simple construction by means of cross-regulation, without a complex arrangement where a separate current sensor circuit is provided to each output of the secondaries to terminate or control the outputs independently from each other based on the detected current values.